RELINQUISHMENT REPORT
EL 28207
PLENTY RIVER REGION, NORTHERN TERRITORY

FAR RESOURCES Pty Ltd
PO Box 96
Palmerston
NT 0831

Plenty Rivers Project
1:100 000 Mapsheets: 5952 Dneiper, 6052 Jinka
1:250 000 Mapsheets: SF5311 Huckitta
Commodities: Cu, Pb, Zn, Mo, Au, Ag

WA Jettner B.Sc.
Minesite Services Australia
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Abstract:
EL 28207 forms part of FAR Resources Plenty Rivers Project which consists of 8 granted exploration licences covering 610km² in the Harts Range/Plenty River area of the Northern Territory, (see figure 2). The area is considered to be prospective for base metals, precious metals and industrial minerals. This report comments work done on the relinquished area in the first five years of tenure. Work in the relinquished area consisted of 1 ground magnetic grid of 251 stations, 1 soil grid of 105 sample sites and 31 rock samples analysed by portable XRF.

Contact Details:
Tenement Holder:
FAR Resources Pty Ltd
PO Box 96
Palmerston
NT 0831

Report Author:
Minesite Services Australia
19 Flametree Cct
Rosebery NT 0831
Contact: Mr Andrew Jettner
Tel: 0447 092 764
Email: andrew@minesiteservices.com.au

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1. LOCATION

EL 28207 is located some 150km to the northeast of Alice Springs in the Northern Territory. The licence has an irregular shape having a north-south length of 25km with an average east-west width of 30km and lies between 22° 30’S to 22° 43’S and 135° 20’E to 135° 38’E. The licence is located within the 1:250K Mapsheet SF5311 “Huckitta” and 1:100K Mapsheets 5952 “Dneiper” and 6052 “Jinka”.

The licence is located upon the Dneiper pastoral lease to the northeast of the Harts Range Police Station and Atitjre Community. The Plenty Highway traverses to the south of the licence.
2. TITLE HISTORY

Mineral Tenure
EL 28207 was granted on 30/03/2011 and this report is the Relinquishment Report which covers activities in the period 30/03/2011 to 29/03/2016, being the first five years of tenure. The licence has an area of 32 graticular blocks (103 km²). At the end of year 5 the licence underwent a voluntary surrender in which 20 graticular blocks were surrendered.

EL 28207 forms part of the Plenty Rivers Project which consists of 8 granted exploration licences covering a total area of 193 graticular blocks (610km²).

The regional area has a mineral exploration history going back to the 1880s when the Harts Range garnet and mica fields were found and exploited by small scale miners.
The above area was voluntarily surrendered at the end of Year 5.
Real Property
EL 28207 is located on the following real property parcel:
NT PPL 1125 “Dneiper Station” which is owned by A & P Davis (c/ Moroak Station RSD 1705 NT).

Other Stakeholders
Other stakeholders in the area, (but not on the licence), are the Irrilree aboriginal community which is located to the southwest of this licence and the Dulcie Range National Park which is located to the northeast of the licence.
3. ACCESS

Access to the exploration licence from Alice Springs is northwards along the Stuart Highway for 68km to the intersection of the Plenty Highway then 166 km along the Plenty Highway to the Harts Range Police Station, then another 22km to the Derry Downs turnoff. Traversing 30km northwards along the Derry Downs road to the Dneiper Station homestead. This is located to the west of the licence area. Access throughout the remainder of the licence is via the Dneiper Station roads and fence lines. Access is generally fair to good depending on vegetation density.
4. GEOLOGICAL SETTING

The Plenty River Project is located in a north-south traverse across the Aileron Province from the Georgina Basin in the north to the Irindina Province in the south.

Georgina Basin

The Georgina Basin is a Paleoproterozoic sedimentary basin that contains dolostone, limestone, sandstone, siltstone and shale. It is a widespread intracratonic basin that was initiated as part of the Centralian Superbasin and extends east into Queensland. It unconformably overlies the Aileron Province, Tennant Region, Murphy Inlier, McArthur and south Nicholson Basins and Lawn Hill Platforms. It is interpreted to be contiguous at depth with the Wiso and Daly Basins and conformably overlies the Kalkarinji Province.

Aileron Province

The Aileron Province is a Palaeoproterozoic metamorphic and igneous terrain containing variably metamorphosed sediments, meta-volcanic rock, calc-silicate rocks, dolerite, mafic rocks and granites. It forms part of the Arunta Region and is a poly-deformed and metamorphosed basement terrain along the southern margin of the North Australian Craton. It is unconformably overlain by the Ngalia, Amadeus, Murraba, Georgina and Eromanga Basins and has largely faulted relationships with the Wurumpi and Irindina Provinces.

Irindina Province

The Irindina Province is characterised by a Neoproterozoic metamorphic terrain that contains metasedimentary gneiss, quartzite, mafic amphibolite and felsic migmatites. It forms part of the Arunta Region and is a fault bounded metasedimentary and igneous province that formed a deep depocentre within the Centralian Superbasin and was metamorphosed in the Ordovician. It is fault contacted with the Aileron Province to the north and unconformably overlain by the Eromanga Basin to the south.


Figure 5. Geological Setting Plenty Rivers Project
i. Regional Geology

The regional geology can be divided into 3 main tectonic elements, separated by west trending shear systems. The southernmost of these elements, the Harts Range Domain, comprises upper amphibolite to granulite facies metasediments belonging to the Harts Range Group. Dominant lithologies include migmatite, metapelite, metabasite, garnet-biotite gneiss and subordinate calc-silicate rock marble and quartzite. The Harts Range Group underwent peak metamorphism during the Larapinta Event at 480-460 Ma.

To the north of the Harts Range Domain is the Kanandra Domain, this contains the Kanandra Granulite which belongs to the palaeoproterozoic Strangways Metamorphic Complex. The Kanandra Granulite forms part of a 150-200km long, west trending belt of intermittently outcropping belt of pelitic and mafic granulites that includes the Bleechmore Granulite to the west. This domain comprises felsic and mafic granulites with garnet-bearing pelitic and semi-pelitic migmatite and rare calc-silicate rock, intruded by deformed granite.

The third major geological element in the licence area is located to the north of the Kanandra Granulite, and is termed the Jinka Domain. This comprises a narrow (5-25km wide) belt of low-pressure amphibolite to granulite facies metasediments intruded by extensive granites. It extends from the Perenti Metamorphics in the west to the Jervois Range in the east, a total distance of more than 100km.

Two major shear zones separate the three tectonic elements in this region: the Entire Point Shear Zone which separates the Harts Range Domain from the Kanandra Domain and the Delny Shear Zone which separates the Kanandra Domain from the Jinka Domain. The Entire Point Shear Zone trends east-northeast, dips steeply south and merges with the east-southeast striking Delny Shear Zone in the Plenty Rivers Project area. The Delny Shear Zone is a major east-southeast striking structure more than 150km in length and is locally up to 3km wide. A substantial gravity gradient is evident across the shear zone, implying it is a major crustal feature.
**ii. Licence Geology**

Locally the basement rocks of interest are covered by a thin veneer of Tertiary to recent sediments. The Tertiary Waite Formation forms a significant impediment to exploration of underlying bedrock.

EL 28207 occurs within the Jinka Domain and a small portion of the Kanandra Domain and comprises metasedimentary rocks intruded by granites. Metamorphism occurred at amphibolite to granulite facies and low pressures during the Strangways Event.

The rocks of the Jinka Domain in the licence area include the following:

- Elyuah Formation, (Pae); shale with silty horizons and a basal pebble conglomerate.
- Grants Bluff Formation, (Pag); fine-grained fissile quartz arenite to quartz-wacke, cross bedded and ripple marked grey quartz arenite.
- Ledan Schist, (Pln); two-mica schist with minor metaconglomerate.
- Dneiper Granite, (Pgd); Grey biotite granite, grading into orthogneiss locally hornblende bearing or quartz deficient.
- Mt Swan Granite, (Pgs); Pink porphyritic hornblende biotite granite.

The Jinka Domain is separated from the Kanandra Domain by the Delny Shear zone.

The Delny Shear Zone is a steeply south-dipping shear zone locally up to 3km wide.

The central tectonic element is the Kanandra Domain, and consists of:

- Kanandra Granulite, (PCK); quartzo-feldspathic schist containing local retrograde shear zones.
- Attuttra Metamorphics, (Pd); comprising gabbro, dolerite and rare norite.
- A highly deformed rock consisting of biotite schist, amphibolite, mylonite and garnet-chlorite schist.

The Kanandra Domain is separated from the Harts Range Domain by the Entire Point Shear Zone.

The Entire Point Shear Zone is a steeply south dipping upper amphibolite shear zone.

The southern tectonic element in the licence is the Harts Range Domain which consists of the following:

- pCh; Pelitic, calcareous and psammitic and felsic gneisses, leucocratic gneiss, quartzites and amphibolites.
- pChs; quartz and garnet bearing amphibolite, minor plagioclase-hornblende gneiss.
- pCh4; meta-calc silicate rock, flaggy quartzite, biotite quartzite, rare calcite-bearing gneiss
- pCh3; leucocratic biotite-quartz-feldspar gneiss.
5. GEOLOGICAL ACTIVITIES

Office Studies.

During the period a broad scale literature survey was conducted on the whole of the Plenty Rivers Project area (11 ELs), which consisted of examining previous explorers data as submitted to the DME as well as current thinking on mineralising systems in the eastern Arunta Region.

Field Studies

Field work consisted of a ground magnetic grid of 250 stations taken with a Geometrics G806 Ground Magnetometer on a 25m x 25m grid.
There was a soil sample grid of 105 sample sites, with A horizon soil samples being analysed by Niton XRF for PB, Zn, Cu and As and samples being taken on a 25m x 25m grid. There were 31 rock samples analysed by Niton XRF within the relinquished area. The locations of the above work is shown on the map below and the results are recorded in the appendices to this report.

![Map showing soil and rock sample locations](image)

6. **CONCLUSIONS**

Field work in the surrendered area has shown little encouragement for the location of economic mineralisation and consequently the decision to relinquish the area was taken.